

Form PTO 1449 U.S. DEPARTMENT OF  
(Modified) COMMERCE  
PATENT AND TRADEMARK

DOCKET NO.

SERIAL NO.

4085-235-27 CIP

09/759,152

APPLICANT

Michelle A.J. PALMER, et al.

AUG 22 2001

LIST OF REFERENCES CITED BY APPLICANT  
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FILING DATE

January 16, 2001

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U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL |    | DOCUMENT<br>NUMBER | DATE  | NAME              | CLASS | SUB<br>CLASS | FILING DATE IF<br>APPROPRIATE |
|---------------------|----|--------------------|-------|-------------------|-------|--------------|-------------------------------|
| 2                   | AA | 6,110,693          | 8/00  | Barak, et al.     |       |              |                               |
| 1                   | AB | 5,891,646          | 4/99  | Barak, et al.     |       |              |                               |
| 2                   | AC | 5,851,771          | 12/98 | Bronstein, et al. |       |              |                               |
| 1                   | AD | 5,538,847          | 7/96  | Bronstein, et al. |       |              |                               |
| 2                   | AE | 5,326,882          | 7/94  | Bronstein, et al. |       |              |                               |
| 2                   | AF | 5,145,772          | 9/92  | Voyta, et al.     |       |              |                               |
| 2                   | AG | 4,978,614          | 12/90 | Bronstein         |       |              |                               |
| 2                   | AH | 4,931,569          | 6/90  | Edwards, et al.   |       |              |                               |
|                     | AI |                    |       |                   |       |              |                               |
|                     | AJ |                    |       |                   |       |              |                               |

FOREIGN PATENT DOCUMENTS

|   |    | DOCUMENT<br>NUMBER | DATE | COUNTRY                                       | TRANSLATION<br>YES NO |  |
|---|----|--------------------|------|---|-----------------------|--|
| 2 | AL |                    |      | PCT/US00/24043 December 5, 2000 Search Report |                       |  |
| 2 | AM | 00/35724           | 6/00 | WIPO  |                       |  |
|   | AN |                    |      |   |                       |  |
|   | AO |                    |      |   |                       |  |
|   | AP |                    |      |   |                       |  |

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

|    |    |  |  |  |  |  |
|----|----|--|--|--|--|--|
| 12 | AQ | Stephane Angers, et al., "Detection of $\beta_2$ -adrenergic receptor dimerization in living cells using bioluminescence resonance energy transfer (BRET)", Proc. Natl. Acad. Sci. USA, 97(7):3684-3689 (2000)   |  |  |  |  |
| 2  | AR | Gurevich, et al., "Arrestin Interactions with G Protein-coupled Receptors. Direct Binding Studies of Wild Type and Mutant Arrestins with Rhodopsin, $\beta_2$ -Adrenergic, and m2 Muscarinic Cholinergic Receptors", J. Biol. Chem., 270 (2):720-731 (1995) (1995) |  |  |  |  |
| Li | AS | Gurevich, et al., "Mechanism of Phosphorylation-Recognition by Visual Arrestin and the Transition of Arrestin into a High Affinity Binding State", Mol. Pharmacol., 51:161-169 (1997)  |  |  |  |  |
| 1  | AT | Rossi et al., "Monitoring Protein-Protein Interactions in Intact Eukaryotic Cells by $\beta$ -galactosidase Complementation", Proc. Natl. Acad. Sci., 94:8405-8410 (1997).   |  |  |  |  |

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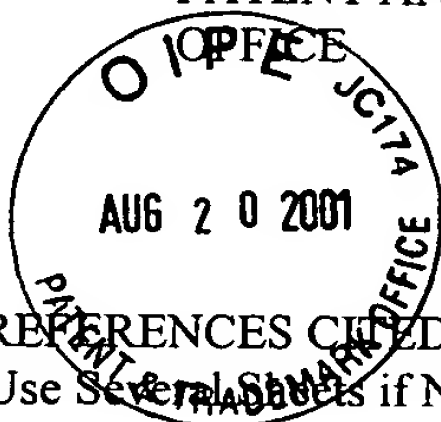
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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

| EXAMINER<br>INITIAL |     |   |
|---------------------|-----|---|
| ✓                   | AU  | Barak et al., "A $\beta$ -Arrestin/Green Fluorescent Protein Biosensor for Detecting G Protein-coupled Receptor Activation", the Journal of Biological Chemistry, 272 (44):27497-27500 (1997)                         |
| ✓                   | AV  | Ferguson, et al., "G-protein-coupled receptor regulation: role of G-protein-coupled receptor kinases and arrestins", Can. J. Physiol Pharmacol., 74:1095-1110 (1996)  |
| ✓                   | AW  | Pitcher et al., "G-protein-coupled receptor kinases", Annu. Rev. Biochem., 67:653-692(1998)   |
| ✓                   | AX  | Lefkowitz, et al., "Adenylate cyclase-coupled beta-adrenergic receptors: structure and mechanisms of activation and desensitization", Annu. Rev. Biochem., 52:159-186 (1983)  |
| ✓                   | AY  | Germeno, et al., "Screening for <i>in vivo</i> protein-protein interactions", Proc. Natl. Acad. Sci., 90:933-937 (1993)   |
| ✓                   | AZ  | Phizicky, et al., "Protein-protein interactions: methods for detection and analysis", Microbiol. Rev., 59(1):94-123 (1995)  |
| ✓                   | AAA | Offermanns, et al., " $G\alpha_{15}$ and $G\alpha_{16}$ couple a wide variety of receptors to phospholipase C", J. Biol. Chem., 270(25):15175-15180 (1995)  |
| ✓                   | AAB | Abdalla, et al., " $AT_1$ -receptor heterodimers show enhanced G-protein activation and altered receptor sequestration", Nature, 407:94-98 (2000)   |
| ✓                   | AAC | Bockaert, et al., "Molecular tinkering of G protein-coupled receptors: an evolutionary success", The EMBO Journal, 18(7):1723-1729 (1999)   |
| ✓                   | AAD | Jordan, et al., "G-protein-coupled receptor heterodimerization modulates receptor function", Nature, 399:697-700 (1999)   |
| ✓                   | AAE | Ng, et al., "Dopamine D2 receptor dimers and receptor-blocking peptides", Bioch. Biophys. Res. Commun., 227:200-204 (1996)  |
| ✓                   | AAF | Hebert, et al., "A peptide derived from a $\beta_2$ -adrenergic receptor transmembrane domain inhibits both receptor dimerization and activation", J. Biol. Chem. 271(27):16384-16392 (1996)                          |
| ✓                   | AAG | Krupnick, et al., "The role of receptor kinases and arrestins in G protein-coupled receptor regulation", Ann. Rev. Pharmacol. Toxicol., 38:289-319 (1998)   |
| ✓                   | AAH | Hamm, "The many faces of G-protein signaling", J. Biol. Chem., 273(2):669-672 (1998)  |
| ✓                   | AAI | Oakley, et al., "Association of $\beta$ -arrestin with G protein-coupled receptors during clathrin-mediated endocytosis dictates the profile of receptor resensitization", J. Biol. Chem., 274(45):32248-32257 (1999) |

EXAMINER

Dolan C. H.

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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER  
INITIAL

AAJ

Zhang, et al., "Cellular trafficking of G protein-coupled receptor/ $\beta$ -arrestin endocytic complexes", J. Biol. Chem., 274(16):10999-11006 (1999)

AAK

Kovoor, et al., "Targeted construction of phosphorylation-independent  $\beta$ -arrestin mutants with constitutive activity in cells", J. Biol. Chem., 274(11):6831-6834 (1999)

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|  | AA | 6,342,345  | 1/29/02 | Blau, et al.                              | 1                     | 1                        |                               |
|  | AB |  |         |   |                       |                          |                               |
| FOREIGN PATENT DOCUMENTS   |    |  |         |   |                       |                          |                               |
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